Hearing Aids for Unilateral Hearing Loss

PATIENTS WHO ARE DEAF in one ear, with normal hearing in the other ear, have considerable difficulty understanding in certain situations. Problems arise when these persons try to carry on a conversation in groups of people; when someone is seated on the side of their impaired ear, or when they are in a theater, meetings or conferences.

The use of a CROS-type (contra-routing of signal) hearing aid can be helpful in some of these situations. The CROS aid is available in either eyeglasses or in behind-the-ear instruments. The microphone is placed on the ear with impaired hearing and the sound is routed into the better hearing ear. An open-type earmold is used.

Purchase of a CROS aid should always be on a rental-trial basis. A thirty-day trial period enables a patient to evaluate the effectiveness of the aid and his tolerance for CROS amplification.

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Mandibular and Maxillary Osteotomy

ESTHETIC SURGEONS over the years have used rhinoplasty as the principal procedure in improving the appearance of patients with facial disharmony. More recently, the combination of a recessive chin and a large nose has been treated by the combination of rhinoplasty and chin-augmentation, using for the latter either the excised nasal hump or a preformed alloplastic implant. Until the pioneering work of Obergaser and Tessier, a patient with severe facial disharmony was beyond surgical redemption.

These patients usually present with the following problems: protrusive or prognathic mandible, recessive or retrognathic mandible, small chin or microgenia, recessive maxilla, protrusive maxilla and hypertelorism. These problems can vary in severity from a patient with a retrognathic mandible and a class II malocclusion to the horribly disfiguring countenance of a patient with Crouzon's disease.

Although the deformities in most of these persons are inherited and resemble these characteristics in their parents, many occur secondary to disease states.

Evaluation of these patients includes a careful examination of the nose, throat, teeth and facial bones. A meticulous analysis of the occlusal relationships of the teeth is essential. The occlusion and cephalometric radiographs should be examined in conjunction with an orthodontist. The construction of a cast of the patient's teeth in dental stone and setting them up in an articulator is a vital step in the assessment of the deformity and the planning of reconstruction.

Retrognathia may be corrected using a horizontal osteotomy of the mandibular parasymphyseal and anterior body regions then sliding this segment forward and fixing it in place with a figure-of-eight wire. Prognathism is effectively treated using a sagittal osteotomy of the mandibular rami placed obliquely from medial to lateral extending from above the cingulum, guarding the inferior alveolar nerve, to the lower lateral border of the angle of the mandible taking care to avoid the nerve. The anterior segment is slid backward and the teeth are fixed in their new occlusal relationship using arch bars and intermaxillary wires.

Maxillary retrusion and protrusion are treated by creating LeFort fractures and repositioning of the maxillae in the desired position, fixing them in place with interosseus wires in similar fashion to repairing a facial fracture. The teeth are wired into occlusion. A pronounced overbite and overjet that is not amenable to orthodontic therapy can be notably improved by extraction of a premolar tooth on each side of the maxilla, the excision of a strip of palatal bone, an horizontal osteotomy of the anterior palate and a pushing back and wiring of the segment. Pronounced stenosis of the maxilla as seen as a residuum following repair of a severe bilateral cleft palate deformity must be corrected by a LeFort II fracture and sometimes the insertion of bone grafts to maintain position.

The most severe cases of facial disharmony are seen in cranio-facial dysostosis such as in Crouzon's disease and Apert's syndrome. Their correction requires a combined neurosurgical approach through a large frontal bone flap to expose the orbital roofs, then the construction of a LeFort III fracture by the facial plastic surgeon. Removal of a central wedge of bone is done to

correct the hypertelorism, and enlargement of the orbits in those cases with exorbita is necessary to accommodate the extruded globes. The latter is a prodigious surgical procedure to be undertaken only by those with a great deal of experience in maxillofacial surgical procedures.

The surgical correction of facial deformities by repositioning of the jaws is a gratifying procedure usually yielding a pronounced improvement in facial harmony.

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Advances in Endoscopy of the Respiratory and Upper Digestive Tract

EXAMINATION OF THE upper respiratory and upper digestive tract has undergone gradual refinements during the past century. The use of reflected proximal lighting of the endoscopes has been replaced with distal lighting in the various endoscopes.

The application to endoscopy of two new major optic and engineering developments has completely revolutionized the quality and extent of the information that can be obtained. The development of coherent flexible fibroptic endoscopes has facilitated rapid examination of the tracheobronchial tree and esophagus under local anesthesia. It has proven particularly successful in the bedside examination of lesions in the esophagus and stomach and has expanded the visualization of the next order peripheral segmental branches of the tracheobronchial tree. There are many limitations of the technique and it is not without hazard.

Simultaneously a new Hopkins rod optical system has completely revolutionized the construction of endoscopic telescopes to open tube endoscopy. In the new Hopkins rod lens system the air interspaces between the bi-convex glass lenses have been replaced with glass rods with polished ends separated by small air lenses. The improved optics and magnification produced by this new invention allow incorporation of a surrounding fibroptic light bundle which provides better visualization and image resolution, and provides adequate light for photography. The merits of permanent documentation by photography are obvious. An endoscopist who incorporates these new instruments into his endoscopic armamentarium will find they help him achieve superior quality of examination.

The Hopkins rod lens system has also been incorporated into a wide angle side view telescope that allows excellent indirect examination of the larynx, pharynx and nasopharynx. This new instrument will enable a family physician or any other doctor to examine these areas with much greater facility than previously possible with a head mirror and nasopharyngeal and laryngeal mirrors.

It is hoped that the ability to visualize these areas by almost all physicians will lead to earlier diagnosis of diseases of the nasopharynx, pharynx and larynx.

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Hair Transplant

THE HAIR transplant autograft continues to be a useful and reliable technique for a surgeon interested in head and neck reconstructive and cosmetic surgical procedures. Emphasis has been on restorations of male pattern hair loss. However, the operation also is useful in restoring hair lost by trauma or surgical scars. We have used the hair transplant successfully in the scars of a temporal face-life, and have grafted a moustache into the scar of a cleft-lip repair. Even thin atrophic scars can be grafted slowly in multiple stages.

Hair survival in the grafts should be at least 90 percent when attention is paid to careful technique. Failure of such hair to grow is often due to poor graft preparation or to insufficient circula-